

believe that this variant is more primitive than others we have described, such as the frequent presence of white neck-spots and semi-rings in drake European Green-winged Teal, which we believe indicates an affinity to the Mallard *Anas platyrhynchos platyrhynchos* Linnaeus (Harrison 1961) at species level. It is a fact that the juveniles and females of many species of duck have spotted bellies and also that some species principally in the southern hemisphere, show a lack of sexual dimorphism with duck-like plumages, which Sibley (1957) attributes to lowered selection pressure against hybridisation. In discussing the Cape Shoveler *Anas smithi* (Hartert) Winterbottom and Middlemiss (1960) consider it probable that the Northern Shoveler *Anas clypeata* Linnaeus diverged from *A. smithi* before the line had evolved a marked sexual dimorphism and that *A. smithi* has remained close to the ancestral form from which *A. clypeata* evolved in the north. It is our view that the occasional spotted breast in drakes of Holarctic duck species represents a reversion to this type of undifferentiated ancestral form and the presence of this variant in the eclipse plumage of the Pintail drake is particularly interesting, in view of the fact that this plumage is also likely to be reversionary, having a survival value from its cryptic coloration and being able to develop in the post-breeding season, when selection pressure against hybridisation must be at its lowest.

We are indebted to Dr. Pamela Harrison for photographing the specimens.

References:

- Harrison, James M. (1946). "Exhibition of two varieties of the Teal, *Anas crecca crecca*." *Bull. B.O.C.* LXVI, p. 24.
- Harrison, James M. and Jeffery G. (1958). "Plumage Variants in drake Gadwall". *Bull. B.O.C.* 79, pp. 78-9.
- Harrison, James M. and Jeffery G. (1961). "A European Green-winged Teal with a white neck-ring". *Bull. B.O.C.* 82, pp. 88-90.
- Sibley, C. J. (1957) "The Evolutionary and Taxonomic Significance of Sexual Dimorphism and Hybridisation in Birds". *Condor*. 59, pp. 166-191.
- Winterbottom, J. M. and Middlemiss, E. H. J. (1959). "Notes on the Cape Shoveler". *Bull. B.O.C.* 80, pp. 154-162.

A snake attack upon a weaver-bird colony.

Possible significance of synchronous breeding activity

by J. H. ELGOOD AND P. WARD

Received 22nd November, 1962

In the series of articles by Pitman (1958, 1962) on reptile predators of birds, there are few accounts of a snake being observed while in the act of killing a wild bird and presumably few people have ever witnessed such an encounter. We feel, therefore, that this description of a snake's attack upon a small weaver-bird colony may be of interest even though the snake was not identified.

The reactions of the birds in the colony to the marauder's visit were quite different from what one would expect. The happenings observed provoked a discussion between us leading to a hypothesis being formulated concerning the significance of synchronous nesting in weaver-bird colonies.

The encounter

On 11th October, 1962, a small colony of Chestnut-and-Black Weavers, *Ploceus nigerrimus castaneo-fuscus*, Lesson was discovered in a roadside swamp near Oyo, western Nigeria. The thirty or so nests were supported by stems of a tall grass and were placed at heights varying between 1–2 metres above the water level. Although attached to grass stems in a manner more typical of *Euplectes* (nests of *P.n. castaneo-fuscus* are usually found in bushes overhanging water, in tree-tops or in bamboo) the nests were of normal form.

While the colony was being scrutinized for signs of activity, a snake was seen to ascend one of the grass stems supporting a nest; it could not be identified but was about one metre long and of slender build; pale olive-brown above, silvery below, but lacking any distinctive markings. The climbing snake was scarcely interrupted by three female weavers which were diving directly at its head, though at each swoop of a bird, it ducked momentarily. On reaching the nest a somewhat clumsy entry was effected after some searching for the opening: the weight of the snake then caused the collapse of the supporting grass so that both snake and nest disappeared from view. Within two minutes, however, the predator was seen climbing to another nest nearby. The interval before the snake's reappearance was so short that it is unlikely that it had found anything in the first nest.

The second nest was entered very rapidly and it was possible to see that when the snake withdrew its head after only a few seconds' search inside, there was nothing in the mouth. Thereupon it detached itself and fell out of sight; then once again, within two minutes, it was seen to be climbing to a third nest. This time the search was fruitful and when the snake withdrew it was seen to be holding a well-feathered nestling in its jaws, with the head still protruding. According to Pitman (1962), this method of seizure is not uncommon. The snake again dropped from view but this time the fall may have been caused by the attack of an adult bird which dived at the intruder as it pulled out the nestling.

The total period for the searching of three nests was only about five minutes. During this time more birds were attracted back to the colony yet only four or five females made any attempt to drive away the predator. Even these feeble attempts deserved respect, however, for they were not merely mobbing actions but definite attacking movements; and, as Hinde has stated (1961), small birds do not normally attack predators.

DISCUSSION

Synchronization of breeding activities is a common feature of Ploceine weaver colonies. Leaving aside the much disputed reasons for colonial breeding, the importance of synchronization within a colony, which appears to have received little attention from students of bird behaviour, is the subject of the following hypothesis:

In those parts of the world where specialized nest-robbers occur (especially in the tropics where some nesting takes place in all months of the year) it seems probable that any such predators finding an accessible colony within their feeding area would attach themselves to it until it became empty. It is unlikely that small birds can effectively defend their nests, but fortunately there is a factor which must limit the losses of eggs and young: the appetite of the predators. It follows therefore, that by

limiting to a minimum the length of the time during which a colony is occupied, the percentage loss of offspring will also be minimal. Close synchronization of breeding activities, being a means of reducing the period of occupation of a colony, may thus be regarded as a form of passive defence against specialized nest predators, although this is probably not its only function.

References:

- Hinde, R. A. 1961 in *Biology and Comparative Physiology of Birds*. Vol. 11, ed. A. J. Marshall. Academic Press.
Pitman, C. R. S. 1958. *Bull. B.O.C.* 78: 5, 6, 7.
Pitman, C. R. S. 1962. *Ibid.* 82: 2, 3.

On some races of *Motacilla flava* Linn. found in Indonesia

by A. HOOGERWERF

Received 16th July, 1962

The difficulties encountered when classifying representatives of this wagtail are already pointed out by other authors. Voous¹ tried to solve part of the problems; he classified the greater part of the material present in the Bogor Museum which I used when studying my freshly collected birds from Princes Island and those from the Karimundjawa and Kangean Archipelagos. Study of this material induced me to publish these notes.

When comparing the series before me with the particulars published by Voous, the results differ on several points. There are for instance two females obtained in January, named by him as adult *simillima* which have the under parts much darker yellow than two females classified by the same author as adult *taivana* (obtained in September and October), though following Voous' own paper, the opposite should be the case in birds in the winter plumage.

An adult bird (shot in October) classified after some hesitation as *tschutschensis* by the same author is indeed "duller yellow" on the under surface, when compared with both January skins, indicated above as *simillima*, but certainly not duller than a third specimen classified as *simillima* ad. ♂ by the same author, which was secured in October in Central Java and also not duller than still another male in winter plumage from Krakatau Island (Strait Sunda): both these birds show also dark brownish markings on the chest. This *tschutschensis* was labelled by Gerlof Mees, who secured the skin near Bogor (West Java), as ♀?, but Voous made the remark on the label "looks like a ♂". However, in his publication he calls this same bird a male without any further comment. This is in my opinion not justified, particularly in this case where it concerns a subspecies which shows sexual dimorphism and which was never before secured on Java.

As the most important reason which induced Voous to consider this bird and a second juvenile male obtained at the same date and in the same locality, not identical with *taivana* or *simillima*, he mentions the darker upper parts. But when comparing fresh skins of *taivana* or *simillima* with material stored for a considerable time in a museum, the necessity to use material obtained at about the same time is very evident. I had occasion to ascertain this as an undisputable fact after comparing my freshly collected skins with those secured many years ago in exactly the same localities and in the same months.